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yielded a velocity of 10 km., a value fairly accordant with that got at Mount Wilson.

These observations and those by Pease evidence a like quality of light in the nebula and the star. We seem to have in this nebula another of those cases met with in the nebulae about *Merope* (*Lowell Observatory Bulletin* No. 55), and *Maia* of the *Pleiades* and about Rho *Ophiuchi* (*Lowell Observatory Bulletin* No. 75), where the identical quality of the star and nebular light and the apparent absorption by the nebulae of the light of more distant stars of the regions leads to the belief that the nebulosity is not self-luminous but shines as by reflected light of the bright stars associated with it.

Since the publication of my observations of the spectrum of the extended nebulosity near *Merope* which led me to the conclusion that the evidence all favored the assumption that the nebula shines by reflected star light, I have secured a similar spectrogram of the nebulosity near *Maia* with the same result: that the star and nebula shine by light identical in quality. It will be recalled that Hertzsprung (*A. N.* No. 4679) since carried out photometric observations to test this conception of the *Pleiades* nebulosity and that he found a result in accord with the interpretation the spectrograms led me to suggest. A recent plate of the nebula N. G. C. 2068 indicates that this is another nebula of this same class.

A photograph of nebula N. G. C. 7023 is reproduced in Plate 24, Vol. II, *Roberts' Celestial Photographs*, and another excellent one, by Keeler, in Plate 65, Vol. VIII, *Publications of the Lick Observatory*.

V. M. SLIPHER.

RECENT OBSERVATIONS OF NOVA AURIGAE, NOVA GEMINORUM NO. 1 AND NOVA GEMINORUM NO. 2

During the past year photographs of a number of the Novae have been made with the 40-inch Lowell reflector. Among these are an extended series of *Nova Persei* (1901) and several negatives for different dates for each of *Nova Aurigae*, *Nova Geminorum* No. 1 and *Nova Geminorum* No. 2. Approximate estimates of the magnitudes of the last named three objects are given herewith. The observations of *Nova Persei* will be given more at length in a forthcoming paper.

<i>Nova Aurigae</i>		
Date	Magnitude	
1917 Feb. 9	12.4	
" 12	12.3	
Nov. 13	12.8	image confused
1918 Jan. 3 & 4	12.3	

The above magnitudes are based on Professor Barnard's observations of faint comparison stars near the Nova. (See *M. N.* 62, 65.)

<i>Nova Geminorum</i> No. 1		
1917 Feb.	9	14.6
"	12	14.6
Nov.	13	14.6
1918 Jan.	4	14.9

These magnitudes are based on Professor Parkhurst's photometric measures of faint stars near the Nova. (See *Astrophysical Journal*, XVII, p. 373.)

<i>Nova Geminorum</i> No. 2		
1917 Feb.	10	10.4
Nov.	12	10.0
"	21	9.6
Dec.	5	10.0
1918 Jan.	3	10.4

These observations are based on the scale of magnitudes published by Kaiser in *A. N.* 4586.

Lowell Observatory, C. O. LAMPLAND.
Flagstaff, Arizona,
January 15, 1918.

DARK NEBULAE

In some of the great diffuse nebulosities the photographs show clear-cut black spots projected on the bright background of the nebula. These spots are generally rather irregular in shape, and are sometimes referred to as "holes" in the nebulosity. Some of the best examples of these appearances are found in the great nebula Messier 8, in *Sagittarius* (see Figure 1, facing p. 94, *Publ. Astr. Soc. of the Pac.*, 29, April, 1917). Reference to this illustration will show at least five prominent markings of this class, besides a number of smaller ones. I have never been able to believe that these are really "holes" in the nebula. In the first place, the edges are often so clear-cut and sharp that it seems much more reasonable to suppose that these are masses of dark matter, "dark nebulae," between us and the luminous background of the greater, bright nebulosity. Again, all lines of evidence point to the conclusion that such an object as Messier 8 is many trillions of miles, perhaps many light-years, in thickness. "Tunnels" trillions of miles in length thru the enormous extent of this nebula, and happening to point precisely to our own position in space, seem against all probability.